## AMENDMENTS TO THE DRAWINGS

Please replace present Figure 1 with the attached replacement Figure 1, in which Figure 1 is labeled as "Prior Art".

Attachment: 1 Replacement Sheet

## REMARKS

Claims 1-36 are all the claims pending in the application.

Applicants thank the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document.

Applicants also thank the Examiner for considering the references cited with the Information Disclosure Statements filed June 10, 2005 and February 23, 2006.

### I. Formal Matters

Figure 1 is objected to because the Examiner maintains it should be labeled as prior art. Applicants respectfully request the withdrawal of this objection in view of the self-explanatory drawing amendment submitted herein.

### II. Rejections under 35 U.S.C. § 103

#### A. Claims 1, 3-5, 7-12, 14, 16-22, 24, 26-28, 30-31 and 33-36

The Examiner rejects Claims 1, 3-5, 7-12, 14, 16-22, 24, 26-28, 30-31 and 33-36 under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. ("Hartung") in view of Holmes et al. ("Holmes"). Applicants traverse this rejection.

Claim 1 recites a digital audio signal encoding method including "based on an input audio signal, generating a time-frequency band table", which the Examiner appears to concede is not taught by Hartung. In particular, the Examiner concedes that Hartung does not teach an encoding method performed on an audio signal and cites to Holmes to allegedly correct the above deficiencies. Hartung, however, teaches a method of encoding video signals for compressing the video signals at a low bit rate (Abstract and col. 1, lines 15-22). Holmes, on the other hand, teaches a method for speech synthesis and recognition by analyzing a speech

waveform and displaying a sequence of phonetic events on a screen or paper (p. 23, paragraph 1 and Fig. 2.10). Thus, Holmes merely teaches a method of generating spectrograms by *plotting* a speech waveform so that the acoustic features can be interpreted (p. 23, paragraphs 1 and 2). Holmes, however, does not teach or suggest encoding audio signals, and more particularly, does not teach or suggest encoding audio signals for compressing the audio signals at a low bit rate. Thus, a person of ordinary skill in the art would not be motivated to modify the features of Hartung to incorporate the features taught by Holmes. Similarly, a person of ordinary skill in the art would not be motivated to modify the features of Holmes to incorporate the features taught by Hartung. That is, there is no teaching or suggestion in the references to motivate a person of ordinary skill in the art to encode the spectrogram taught in Holmes. Therefore, image encoding method of Hartung, which performs bit allocation and conditional replenishment, is not compatible for generating a spectrogram of Holmes because the arts taught in each are unrelated in their functions.

Moreover, Holmes merely teaches that in displaying a wide-band spectrogram of a speech waveform, such as in Figure 2.10, it is preferable to use the horizontal dimension (i.e., the x-direction) of the spectrogram *for plotting* the time component, and to use the vertical dimension (i.e., the y-direction) of the spectrogram *for plotting* the frequency component (p. 23, paragraph 1). The wide-band spectrogram of the speech waveform is never referenced as a table. Therefore, Holmes does not teach or suggest a method of generating a *time-frequency band table*, which can be referred to and indexed to perform a search for a nearest neighbor block and generate information on the nearest neighbor block, as asserted by the Examiner.

In addition, claim 1 recites a digital audio signal encoding method including "based on the generated time-frequency band table, searching for a nearest neighbor block of a block being currently encoded, and generating information on the nearest neighbor block", which the Examiner asserts is taught by Hartung. Applicants respectfully disagree. Hartung teaches an image encoder which employs adaptive bit allocation, *which relies on perceptual criteria of the human visual system*, together with conditional replenishment and quantization (col. 1, lines 40-43 and col. 2, lines 37-41). Furthermore, Hartung teaches bit allocation depends on the amount of conditional replenishment and the amount of motion data (col. 3, lines 28-32). In particular, Hartung teaches that conditional replenishment is applied by determining how much of the subband data will be repeated from the previously encoded subbands based on equation (1) (col. 3, lines 33-60). After conditional replenishment is performed on the subbands having significant information, side information indicating which pixels (blocks) are repeated from the previous frame and which pixels are quantized is sent to an entropy coder 330 to be encoded (col. 3, lines 61-65). Equation (1) of Hartung is not based on the Euclidian distance between a current block and an object block for determining a nearest neighbor block, but merely determines whether a subband data has been repeated in a previously encoded subband. Therefore, Hartung merely teaches determining which pixels are repeated in the subband data. Hartung, however, does not teach or suggest *searching for a nearest neighbor block* (based on the generated time-frequency band table), and generating information on the nearest neighbor block, as recited by claim 1.

In view of the above, Holmes does not correct the deficiencies of Hartung. Therefore, Applicants submit that claim 1 would not have been t rendered obvious by the applied references for at least the above reasons.

In addition, since independent claims 7, 14, 17, 21, 26, 30 and 34 contain features similar to the features of claim 1, claims 7, 14, 17 21, 26, 30 and 34 are patentable for reasons analogous to those presented above in conjunction with claim 1.

Furthermore, Applicants submit that the remaining dependent claims (claims 3-5, 8-12, 16, 18-20, 22, 24, 27-28, 31, 33 and 35-36) are patentable at least by virtue of their dependencies.

**B. Claims 2, 15, 23 and 32**

The Examiner rejects claims 2, 15, 23 and 32 under 35 U.S.C. 103(a) as being unpatentable over Hartung in view of Holmes and in further view of Nakamura (US 6,226,325). However, Nakamura fails to correct the deficiencies of Hartung and Holmes presented above.

**C. Claims 6, 13, 25 and 29**

The Examiner rejects claims 6, 13, 25 and 29 under 35 U.S.C. 103(a) as being unpatentable over Hartung in view of Holmes and in further view of Zibman et al. (US 4,748,579 "Zibman"). However, Zibman fails to correct the deficiencies of Hartung and Holmes presented above.

## III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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